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09/548,031	04/12/2000	David Wiener	WIE-003	5389

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EXAMINER
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DABNEY, PHYLESHA LARVINIA

ART UNIT	PAPER NUMBER
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2643

DATE MAILED: 03/24/2004

9

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/548,031

Applicant(s)

WIENER, DAVID

Examiner

Phylesha L Dabney

Art Unit

2643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-54 is/are pending in the application.
- 4a) Of the above claim(s) 21-25, 32, 35, 39, 40 and 46-53 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 26-31, 33, 34, 36-38 and 41-45 is/are allowed.
- 6) ☒ Claim(s) 1-9, 16-20 and 54 is/are rejected.
- 7) ☒ Claim(s) 10-12, 14 and 15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 2643

### **DETAILED ACTION**

This action is in response to the amendment filed on 9 January 2004 in which claims 1-20, 26-31, 33-34, 36-38, 41-45, and 54 are pending. Claims 32, 35 were cancelled. Claims 21-25, 39-40, 46-53 were withdrawn.

#### ***Claim Objections***

1. Claims 39-40 are objected to because of the following informalities: they depend from cancelled claim 32. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 5-9, 13, 16-20, and 54 are rejected under 35 U.S.C. 103(a) over Boyden (U.S. Patent No. 5,815,579).

Regarding claim 1, Boyden teaches a wearable speaker system comprising: a garment including a first duct (14, 24; 56, 58; 76; 84, 92; 102, 104; 306) having lengthwise, widthwise, and heightwise dimensions which are perpendicular to each other (figs. 1-15) defining a chamber, and at least one sound transducer (10, 12; 72, 74; 82, 90; 106, 108; 302, 304) mounted in the duct. Boyden teaches the widthwise dimension as being variable from less than three or

Art Unit: 2643

more and the heightwise dimension as approximately one, thus the ratio includes having a widthwise to heightwise ration of not more that three to one (figs. 1-16). Furthermore, since the Boyden references allows the dimensions of the speaker system to be varied and it is known to construct speaker systems of any suitable dimensional ratio for obtaining a desirable placement of the system and the promotion of comfort and fit to the user, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the garment of Boyden with a widthwise to heightwise ratio of not more that 3 for the reasons stated above.

Regarding claim 2, Boyden discloses the first duct is adapted to flex without pinching off the first duct chamber (Boyden, fig. 2; col. 5 lines 24-34; col. 7 lines 4-13; col. 13, lines 61-63).

Regarding claim 3, Boyden does not teach the first duct having a substantially round cross-section, but the combination does teach adding filler (Boyden, acoustic transparent material). The examiner takes official notice that it is known in the art to include enough filler, such that a round cross-section is produced, for insulation purposes. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have a round cross-section by including filler in the invention of the combination for insulation purposes.

Regarding claim 5, Boyden discloses the second transducer faces outward toward an ear of the wearer (see figures).

Regarding claim 6, Boyden discloses the garment is one of a jacket, vest, and a shirt. (Boyden, col. 2 lines 55-61).

Art Unit: 2643

Regarding claim 7, Boyden discloses a second duct (14, 24; 56, 58; 76; 84, 92; 102, 104; 306) having first and second ends defining a second duct; and a least one second sound transducers (10, 12; 72, 74; 82, 90; 106, 108; 302, 304) mounted to the second duct.

Regarding claim 8, Boyden discloses the second duct is adapted to flex without pinching off the second duct chamber (Boyden, fig. 2; col. 5 lines 24-34; col. 13, lines 61-63).

Regarding claim 9, Boyden does not teach the second duct having a substantially round cross-section, but the combination does teach adding filler (Boyden, acoustic transparent material). The examiner takes official notice that it is known in the art to include enough filler, such that a round cross-section is produced, for insulation purposes. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have a round cross-section by including filler in the invention of the combination for insulation purposes.

Regarding claim 13, Boyden discloses the garment has a collar and one of the first and second duct is attached to the collar of the garment (Boyden's lapel, col. 5 lines 41-44).

Regarding claim 16, Boyden discloses the second duct defines at least one port (Boyden's vent, col. 2 lines 43-54).

Regarding claim 17, Boyden does not teach a first securing ring is coupled to the first duct adjacent the first end and a second securing ring is coupled to the second duct adjacent the second end, the first and second rings each being detachably coupled to the garment and at least partially securing the second duct to the garment. However, the examiner takes official notice that it would have been obvious to one of ordinary skill in the art at the time the invention was to include first and second securing rings at the first and second duct respectively, for reinforcing

Art Unit: 2643

the location where a component would be attached to prevent tearing of the garment. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include first and second securing rings in the invention of the combination for reinforcement.

Regarding claim 18, Boyden discloses the speaker system comprising: an audio player (Boyden, col. 2 lines 64-67); and a transducer wire coupled to each of the sound transducers (Boyden, col. 8 lines 21-27).

Regarding claim 19, Boyden discloses the audio player positioned in a pocket of the garment (Boyden, col. 2 lines 64-67; col. 8 lines 21-26; col. 14 lines 3-9).

Regarding claim 20, Boyden discloses the second duct crosses one of the shoulders of the garment (Boyden, figures 6-8).

Regarding claim 54, as shown in figures 1 and 5-16, Boyden discloses a modular personal wearable speaker system attachable to a garment and for use with a portable player, comprising: a plurality of ducts (14, 24; 56, 58; 76; 84, 92; 102, 104; 306) having a first end and a second end and defining a chamber there between; a plurality of sound transducers (10, 12; 72, 74; 82, 90; 106, 108; 302, 304), the ducts each defining an opening into the chamber (fig. 1, shows the chamber), the opening adapted to receive at least one of the sound transducers, wherein the ducts (fig. 1, 5-16, ducts in multiple configurations) are adapted to be interchangeably coupled to the garment, the transducers are adapted to be interchangeably coupled to the ducts (figs. 5-16, multiple speaker configurations; one or more transducers, col. 7 lines 21-29).

Art Unit: 2643

3. Claim 4 is rejected under 35 U.S.C. 103(a) over Boyden (U.S. Patent No. 5,815,579), in view of Liautaud (U.S. Patent No. 4,322,585).

Regarding claim 4, Boyden teaches the at least first sound transducer comprising a first pair of sound transducers (10, 12; 72, 74; 82, 90; 106, 108; 302, 304). Boyden does not teach facing the pair of sound transducers inward toward the body. Liautaud teaches facing the pair of sound transducers facing inward toward the body of the wearer for promoting mechanical sound transmissions (col. 3, lines 6-10). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to position the first pair of transducers inward in the invention of Boyden, as taught by Liautaud, for promoting mechanical sound radiation.

#### ***Allowable Subject Matter***

4. Claims 26-31, 33-38, and 41-45 are allowed.

5. Claims 10-12 and 14-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Response to Arguments***

Applicant's arguments with respect to claims 1-9, 13, and 16-20 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments filed 9 January 2004 with respect to claim 54 have been fully considered but they are not persuasive.

6. With respect to claim 1, the applicant argues that the Boyden reference does not teaches support for a particular widthwise to heightwise dimensional relationship of not more than three to one subject to the Examiner's statements in the previous office action. However upon further review it was found that figure 16 teaches a dimensional relationship of not more than three to one (see the amended rejection above).

7. With respect to claim 2, the applicant argues that the Boyden reference does not support the first duct being adapted to flex without pinching off the first duct chamber. The Examiner disagrees with the statement. Boyden teaches in figure 2 a Type II system, which is clearly defined in the specification as being flexible (col. 7 lines 4-13) and appears unpinched.

8. With respect to claims 3 and 9, the applicant argues that the Boyden ducts could not have a round cross-section. The Examiner disagrees with the statement. Boyden teaches filler being added to the garment such that the garment will exhibit a rounded cross section. Boyden also teaches that the duct will conform to the garment. Therefore, if sufficient filler is added to the garment for insulation purposes, etc., then the garment will exhibit a rounded "puffy" cross-section and the conforming duct will exhibit a rounded cross-section through association with the garment.

9. With respect to claim 54, the applicant argues that the transducers are not interchangeably coupled to the ducts. The examiner disagrees with this statement. Boyden teaches being able to use a tweeter(s) and woofer(s) in combination to achieve the desired response (col. 6 lines 1-5),



Art Unit: 2643

and being able to "substitute" [interchange] two or more transducer for one transducer in the alternate configurations shown (col. 7 lines 21-28). Therefore, the rejection is maintained.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phylesha L Dabney whose telephone number is 703-306-5415. The examiner can normally be reached on Mondays, Tuesdays, Wednesdays, Fridays 8:30-5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz can be reached on 703-305-4708. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

**Any response to this action should be mailed to:**


Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**Or faxed to:**

(703) 872-9314, for formal communications intended for entry and for informal or draft communications, please label "Proposed" or "Draft" when submitting an informal amendment.

(703) 306-0377, for customer service questions.

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

PLD  
  
March 21, 2004

  
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